

TRANSLATION

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference R-80 | FOR FURTHER ACTION | See Form PCT/IPEA/416 |
| International application No. PCT/JP2004/018537 | International filing date (<i>day/month/year</i>) 07.12.2004 | Priority date (<i>day/month/year</i>) 08.12.2003 |
| International Patent Classification (IPC) or national classification and IPC F16K7/17 | | |
| Applicant FUJIKIN INCORPORATED | | |

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| 1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36. |
| 2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet. |
| 3. This report is also accompanied by ANNEXES, comprising: a. <input type="checkbox"/> (<i>sent to the applicant and to the International Bureau</i>) a total of _____ sheets, as follows: <input type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions). <input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box. b. <input type="checkbox"/> (<i>sent to the International Bureau only</i>) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions). |
| 4. This report contains indications relating to the following items: <input checked="" type="checkbox"/> Box No. I Basis of the report <input type="checkbox"/> Box No. II Priority <input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability <input type="checkbox"/> Box No. IV Lack of unity of invention <input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement <input type="checkbox"/> Box No. VI Certain documents cited <input type="checkbox"/> Box No. VII Certain defects in the international application <input type="checkbox"/> Box No. VIII Certain observations on the international application |

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| Date of submission of the demand | Date of completion of this report |
| Name and mailing address of the IPEA/JP | Authorized officer |
| Facsimile No. | Telephone No. |

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Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language _____, which is the language of a translation furnished for the purposes of:
- ☐ international search (Rule 12.3 and 23.1(b))
- ☐ publication of the international application (Rule 12.4)
- ☐ international preliminary examination (Rule 55.2 and/or 55.3)
2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:
- ☒ the international application as originally filed/furnished
- ☐ the description:
- pages _____ as originally filed/furnished
- pages* _____ received by this Authority on _____
- pages* _____ received by this Authority on _____
- ☐ the claims:
- nos. _____ as originally filed/furnished
- nos.* _____ as amended (together with any statement) under Article 19
- nos.* _____ received by this Authority on _____
- nos.* _____ received by this Authority on _____
- ☐ the drawings:
- sheets _____ as originally filed/furnished
- sheets* _____ received by this Authority on _____
- sheets* _____ received by this Authority on _____
- ☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.
3. ☐ The amendments have resulted in the cancellation of:
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____
4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).
- ☐ the description, pages _____
- ☐ the claims, nos. _____
- ☐ the drawings, sheets/figs _____
- ☐ the sequence listing (*specify*): _____
- ☐ any table(s) related to sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement | | |
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| 1. Statement | | | |
| Novelty (N) | Claims | <u>1-6</u> | YES |
| | Claims | | NO |
| Inventive step (IS) | Claims | <u>1-6</u> | YES |
| | Claims | | NO |
| Industrial applicability (IA) | Claims | <u>1-6</u> | YES |
| | Claims | | NO |
| 2. Citations and explanations (Rule 70.7) | | | |
| [Citations] | | | |
| Document 1: JP 2000-65225 A (CKD Corp.), 03 March 2000, entire text and fig. 1 to 14 | | | |
| Document 2: JP 9-100930 A (Kabushiki Kaisha Esutekku), 15 April 1997, entire text and fig. 1 to 5 | | | |
| Document 3: JP 2003-42314 A (Fujikin Inc.), 13 February 2003, entire text and fig. 1 to 2 | | | |
| Document 4: JP 10-332003 A (CKD Corp.), 15 December 1998, entire text and fig. 1 to 5 | | | |
| Claims 1 to 6 | | | |
| Documents 1 to 4 are reference documents that define the general state of the art of the technical field in question. However, the documents that are cited in the international search report do not disclose or suggest the fluid controller equipped with a block-shaped main body, which comprises a fluid inflow passage, a fluid outflow passage and a recessed part that opens out in the upwards direction, and a diaphragm disposed within the recessed part of the main body, which is pressed against the annular valve seat or retracted from the annular valve seat in order to close or open the flow | | | |

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| Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
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passage, wherein:

the recessed part has a form consisting of a section with a large diameter, which is located in the vicinity of the opening, and a section with a small diameter, which is connected to the lower part of the large diameter section via a stepped section, said recessed part being provided with a flow passage formation disk that is inserted into said recessed part;

the flow passage formation disk is configured from a cylindrical section with a large diameter, which is configured so as to mesh with the large diameter section of the recessed part in a watertight manner, a cylindrical section with a small diameter, which is configured so that the outer diameter thereof is smaller than the inner diameter of the small diameter section of the recessed part and is also configured so that the lower end thereof is received by the bottom surface of the recessed part, and a linking section, which is configured so as to link the lower end of the large diameter cylindrical section and the upper end of the small diameter cylindrical section and is also configured so as to be received by the stepped section of the recessed part;

the outer peripheral edge of the diaphragm is affixed to the upper end of the large diameter cylindrical section of the flow passage formation disk;

the valve seat is provided to the upper end of the small diameter cylindrical section of the flow passage formation disk;

the inner periphery of the large diameter cylindrical section of the flow passage formation disk, the diaphragm, the valve seat and the upper surface of the

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Box No. V

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linking section of the flow passage formation disk form an annular space on the interior of the large diameter cylindrical section;

the linking section of the flow passage formation disk is provided with a plurality of through holes that interconnect the annular space on the interior of the large diameter cylindrical section with the annular space on the exterior of the small diameter cylindrical section, which is formed between the small diameter cylindrical section of the flow passage formation disk and the peripheral surface of the small diameter section of the recessed part; and

either the fluid inflow passage or the fluid outflow passage is formed so as to connect with the lower end of the small diameter cylindrical section of the flow passage formation disk, while the other member is formed so as to connect with the annular space on the exterior of the small diameter cylindrical section of the flow passage formation disk.